

REMARKS

Claims 1-16 are pending and claims 17-19 are newly added. Claims 1-8, 10, 11, 13 and 14 are rejected. Claims 9, 12, 15 and 16 are objected to. The drawings filed on September 6, 2001 are objected to. Claims 1-16 have been amended.

The Applicant would like to that the Examiner for indicating the allowability of claims 9, 11, 12, 15, and 16. The Applicant would like to reserve the right to rewrite the claims in the manner suggested by the Examiner, pending further prosecution on the merits.

The Examiner objected to claim 4 because of a minor informality. With this amendment, the informality has been addressed and it is respectfully requested that the claim in now in condition for allowance.

DRAWINGS

The Examiner objected to Figures 1 and 2. A drawing amendment with red-lined drawing corrections is being submitted under separate cover to address the Examiner's drawing objections.

35 U.S.C. § 112

Claim 11 is rejected under 35 U.S.C. § 112, second paragraph as being allegedly indefinite. Applicant respectfully traverses the rejection. The Applicant has amended claim 11 to clarify the claimed features and therefore, it is respectfully requested that the rejection

be withdrawn and that claim 11 be allowed. If any further clarification is required, the Examiner is earnestly solicited to contact the undersigned or any additional information.

35 U.S.C. § 102

Claims 1-3 and 5-7 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Thompson-Russel (U.S. Patent No. 4,859,901). Applicant respectfully traverses the rejection.

The Applicant respectfully submits that the present amendment renders the rejection moot. Newly amended claim 1 is broadly directed towards a color cathode-ray tube comprising a panel having a fluorescent plane formed on the inner surface thereof. A shadow mask is arranged at the inner side of the panel, having a predetermined distance therefrom. The shadow mask has an effective area in which electron beam passage holes are formed and a non-effective area surrounding the effective area. At least one half etching line is formed at the non-effective area of the shadow mask and at least one half etching line comprises a portion that extends a distance parallel to a length or a width of the effective area. The at least one half etching line is located in a same plane or a plane parallel to the effective area.

In claim 1 of Thompson-Russell (and as illustrated in Figure 2, #24), "said weakened portions are provided substantially in each corner only of the mask sheet, said portions being arranged with respect to a respective diagonal defined by the rectangular shadow mask such

that said portions are weaker in a direction transverse to the respective diagonal than in a direction parallel to said diagonal.”

All of the various embodiments shown in Figures 2, 5, 7, 8, 9 and 11 of Thompson-Russell show weakened portions that are parallel to the corner diagonal. This in contrast to the Applicant's claimed invention where at least one half etching line comprises a portion that extends a linear distance parallel to a length or a width of the effective area.

Claims 1 and 13 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Dougherty (U.S. Patent No. 4,191,909). Applicant respectfully traverses the rejection.

Dougherty discloses a color cathode ray tube with a shadow mask having a peripherally grooved skirt. Dougherty achieves suppression of visible electron flooding of the screen due to electron reflection off exposed shadow mask surfaces. Note that in Figure 2 (and Col. 3, lines 45-57), the surface exposed to the overscanned electrons on the inside surface 46 of the shadow mask skirt 48 has an array of close-spaced grooves 49 oriented to scatter a major fraction of the reflected overscanned electrons away from the screen to suppress the visible electron flooding. The grooves are oriented substantially circumferentially and are transverse to the trajectories of the overscanned electrons. In other words, the shadow mask skirt 48 is perpendicular to the shadow mask.

This is in contrast to the claimed embodiment of the present invention, where the etched lines lie in the same plane or a plane parallel to the effective area which includes the shadow mask. For at least this reason, as well as the additionally recited features in claim 1,

as well as the distinctions presented above in traversing the Thompson-Russell patent, the Applicant respectfully requests that the rejection be withdrawn and that claim 1 be allowed.

Claim 13 is a dependent claim that depends upon independent claim 1 and should be allowable for at least the same reasons presented above regarding independent claim 1 as well as the additionally recited features. Therefore, Applicant respectfully submits that the rejection be withdrawn and that claim 13 be allowed.

35 U.S.C. § 103

Claims 4, 10 and 14 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 4,191,909 to Dougherty. Applicant respectfully traverses the rejection.

It is respectfully submitted that this rejection has been rendered moot by the present claim amendment. Furthermore, claims 4, 10 and 14 are dependent claims that depend from independent claim 1 and therefore should be allowable for at least the same reasons presented above regarding claim 1, as well as the additionally recited features in the claims.

Additionally, the Applicant would like the Examiner to note that Dougherty is directed towards an invention that is quite different from that of the Applicant's claimed invention. Dougherty relates to scattering electron beams and thereby reducing the reflection by cutting a groove to the skirts portion. This is in contrast to the claimed embodiments of the present invention which are directed towards using the etched lines to increase the supporting strength of the shadow mask.

Similarly, the Applicant also respectfully submits that there is no motivation to combine the references which is a basic requirement to establish a prima facie case of obviousness. None of the applied references address the same problem that the claimed invention is solving, namely that the use of etched lines in the claimed configuration increase the strength of the shadow mask, thereby allowing the shadow mask to endure shocks. The Applicant would like the Examiner to note the results found in Table 1 on page 8 of the specification illustrating the increased shock resisting capability of the Applicant's claimed invention.

This is in contrast to the problems addressed by Thompson-Russell, which discloses weakening the blind edge direction during the bilateral drawing process to help prevent both the formation of wrinkles in the corners and the occurrence of irregularities in the shape of the elongated apertures (Col. 2, lines 60-66).

Furthermore, the Dougherty patent also does not address the same problems that the claimed embodiments of the present invention solves. Dougherty discloses the suppression of visible electron flooding of the screen due to electron reflection off exposed shadow mask surfaces with no increase in manufacturing costs.

Finally, the Lee et al. patent also does not solve the same problems that the various embodiments of the present invention solves. Lee et al. discloses a composition for forming a conductive layer for a cathode ray tube. In Lee et al., the composition improves conductivity, contrast characteristics and film properties.

New claims 17-19 recite related subject matter to that of claims 1-16 and should be allowable for at least the same reasons presented above regarding the pending claims.

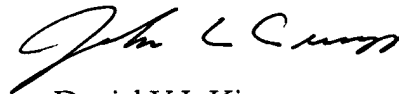
CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance and that all the pending claims be allowed. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **JOHN L. CICCOTZI**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,

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